REMARKS

The examiner's attention to this lengthy application is appreciated. Reconsideration is respectfully requested. In addition, Applicant is a small entity and requests a telephone conference with the Examiner to help resolve any remaining issues.

Status of Claims

Claims 1, 3–13, 15–17, 65–66, 76, 78–82, 130, 132, 134–139 are currently pending.

Prior Election/Restrictions

In response to the prior Office Action dated September 12, 2005 regarding a restriction requirement, on October 11, 2005 Applicants advised that none of the then-pending claims were generic to all of the patentably distinct Species I through XIV as outlined in that Office Action. Applicants noted, however, that independent Claim 65 is generic to the plurality of disclosed patentably distinct Species I through XII (i.e., Figures 3 through 14a).

In response to the requirement to elect a single disclosed Species, Applicants previously elected Species X (i.e., Figures 12 and 12a). All the currently-pending claims are believed to read on the elected Species X (i.e., Figures 12 and 12a).

Drawings

The remaining objection to the drawing is not understood, and clarification or withdrawal is requested. On September 10, 2009, Applicants amended the specification to include references and submit Replacement Sheets for Figures 4, 6, and 12. Regarding the term "means for telescoping" in claim 33, on September 10, 2009 that claim was canceled without prejudice. It is believed the drawings comply with 37 CFR 1.83(a). Reconsideration is respectfully requested.

Specification

Paragraph 0011 of the specification is amended to correct an obvious grammatical error. No new matter is being added.

Pending Independent Claims Are Patentable over Covert et al.

The Office Action dated November 24, 2009, at page 4, *with original emphasis*, stated:

> Regarding claim 1, the Covert et al. reference discloses a packing cartridge (Fig. 3) for use in a packing bore (Fig. 3), wherein the packing bore has a cylindrical interior wall and a seat (Fig. 3), the packing cartridge comprising: a generally cylindrical sleeve (including the element the element [12a] that has interior wall 78 and the element 76); a first abutment ring (84); a second abutment ring (52); telescoping structures (Fig. 3); and a retaining ring (90). Note that the telescoping structures include the element having internal wall 78 and the element 66, in which the element having interior wall 78 is **capable of** telescoping and allowing for squeezing of the first abutment ring and the second abutment ring co-axially closer to one another. Also note that the packing cartridge of the Covert et al. reference is **capable of** being used in the environment as claimed in claim 1.

This rejection is respectfully traversed. As discussed below, the claim language is reasonably clear. Covert et al. does not disclose "a packing cartridge for use in "a packing bore" of a plunger-type pump as required by the pending claims. Among other things, Covert et al. does not disclose "a packing bore" and it does not disclose "a removable gland" of a packing bore.

As discussed below, Covert et al. does not disclose a structure "capable of being used in the environment as claimed in claim 1" (or the other independent claims). The structure in Covert et al. lacks structure required by the claims. In addition, Covert et al. does not disclose "operatively positioned" elements to function as required by the pending claims. The structure of Covert et al. would *not* be operative in the environment *nor* are elements operatively positioned as required by the claims.

Independent Claims Require Structure Adapted For Use in a "Packing Bore"

Independent claims 1, 65, and 135 each require a structure, that is, "a packing cartridge *for use in a packing bore of a plunger-type pump, wherein the packing bore has a generally cylindrical interior wall and a seat and a removable gland.*"

Claim 1 requires that "the packing cartridge includes "a generally-cylindrical sleeve having an outer cylindrical profile adapted to be at least partially positioned in the packing bore." Claim 65 requires "a first sleeve portion adapted to be positioned in at least a portion of the packing bore." Like Claim 1, Claim 135 requires "a generally-cylindrical sleeve having an outer cylindrical profile adapted to be at least partially positioned in the packing bore."

All of Claims 1, 65, and 135 require that "*the packing cartridge is adapted to be positioned in the packing bore between the seat and the removable gland and so that the squeezing of the first abutment ring and the second abutment ring closer together can be provided by tightening the removable gland over the packing cartridge.*"

In this regard, MPEP 2106(II)(C) provides:

> The subject matter of a properly construed claim is defined by the terms that limit its scope. It is this subject matter that must be examined. As a general matter, the grammar and intended meaning of terms used in a claim will dictate whether the language limits the claim scope. Language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation. The following are examples of language that may raise a question as to the limiting effect of the language in a claim:
>
> (A) statements of intended use or field of use,
>
> (B) "adapted to" or "adapted for" clauses,
>
> (C) "wherein" clauses, or
>
> (D) "whereby" clauses.
>
> This list of examples is not intended to be exhaustive. See also MPEP § 2111.04.

While the use of such terms "may raise a question as to the limited effect of the language in a claim," in this case the question is answered. As will hereinafter be discussed, the structure of the packing cartridge is limited by the intended *use in a packing bore of a plunger-type pump,*

wherein the packing bore has a generally cylindrical interior wall and a seat and a removable gland.

In addition, MPEP 2171.05(g) provides:

> A functional limitation must be evaluated and considered, just like any other limitation of the claim, *for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used.* A functional limitation is often used in association with an element, ingredient, or step of a process to define a particular capability or purpose that is served by the recited element, ingredient or step. ...

Applicant's specification is clear regarding the context and functional limitations of the intended use in a packing bore of a plunger-type pump, including what such terms as "plunger-type pump," "packing bore," "packing," "seat" of a packing bore, and "removable gland" of a packing bore each fairly convey to a person of ordinary skill in the pertinent art in the context in which such term is used.

The specification identifies and describes a "*plunger-type pump*":

> [0001] The present invention generally relates to positive-displacement pumps, and, more particularly, to plunger-type pumps. More particularly still, the invention relates to the packing seals and assemblies for reciprocating plungers in such pumps. The invention also relates to the maintenance and use of such fluid pumps.
>
> ...
>
> [0002] A positive-displacement pump, sometimes referred to as a reciprocating fluid pump or as a reciprocating power pump, is a type of fluid pump driven by power from an outside source applied to the pump.
>
> [0003] There are several types of reciprocating power pumps. Typically, the pumps are classified as being plunger pumps or piston pumps. *A plunger pump is differentiated from a piston pump in that a plunger moves past stationary packing*, whereas a piston carries packing with it. A major problem associated with positive-displacement fluid pumps, especially high-pressure pumps, is that of providing a satisfactory seal for the piston or plunger.
>
> ...

[0007] Generally, a positive-displacement pump has a fluid end (sometimes referred to as the liquid end) and a power end.

[0008] The fluid end is that portion of the pump that handles the fluid. It consists of a pumping chamber (sometimes referred to as a compression, fluid, or liquid chamber or cylinder), and various ports, valves, and other components.

[0009] The pumping chamber is a chamber or plurality of chambers in which the motion of the plunger(s) or piston(s) is imparted to the liquid (or fluid). A piston or plunger is positioned to reciprocate in a cylindrical port, which can be considered to be the pumping chamber or a portion of the pumping chamber. The cylindrical port for the piston or plunger is a heavy-walled structure adapted for withstanding the high forces of containing the reciprocating piston or plunger.

The specification identifies and describes a "*packing bore*":

[0011] A plunger is a smooth rod that is attachable to a crosshead and is capable of exerting pressure upon a liquid within the pumping chamber. Sealing rings for a plunger are stationary, the plunger sliding within the rings. The cylindrical port for a plunger-type pump typically has two portions with different diameters, a plunger bore and an axially aligned packing bore. The packing bore has a larger diameter ~~adapted~~ than the plunger bore, so that *the packing bore is adapted for accommodating packing between the interior cylindrical wall of the packing bore and the outward cylindrical surface of the plunger*.

...

[0018] The plunger of the pump is positioned to reciprocate back and forth in the cylindrical port of the pumping chamber. *The cylindrical port consists of a heavy-walled structural body defining the plunger bore and the packing bore*, of which at least the interior cylindrical volume of the plunger bore can be considered to be at least a portion of the pumping chamber. The heavy-walled cylinder of the cylindrical port is designed to withstand the high-reciprocating and high-pressure forces to accommodate the plunger. Typically, at the limit of its stroke, the plunger fills nearly the full length of the cylindrical port, and in some designs exceeds the full length of the cylindrical port and extends into another portion of the plumping chamber.

...

[0021] As mentioned above, a "*packing bore*" is provided adjacent the plunger bore in the cylindrical port. The packing bore

has a generally cylindrical interior wall with an internal diameter ("I.D.") that is larger than an internal diameter of the plunger bore and that is co-axially aligned with the plunger bore. *An annular space is defined between the interior wall of the packing bore and a plunger extending through the packing bore into the plunger bore. In other words, the annular space is also substantially the same as the difference between the I.D. of the packing bore and the I.D. of the plunger bore.*

The specification further identifies and describes that the function of a "packing bore" is to accommodate "packing" *in the annular space between the interior wall of the packing bore and the plunger:*

[0026] *The packing bore is for accommodating relatively soft "packing" in the annular space between the interior wall of the packing bore and the plunger.* The packing is for sealingly engaging the plunger to help prevent fluid leakage from around the plunger as it reciprocates in the plunger bore, which enables the compression of fluids in the pumping chamber.

[0027] The packing bore can accommodate various styles of packing. Historically, loose packing material was simply "stuffed" into the packing bore. Early on, packing material was formed into ring-shaped packing elements. The packing elements can be formed into rings having a rectangular or square cross-section. The packing rings can be split rings to facilitate assembly or removal of the packing rings from the packing bore. Because the packing material is relatively soft, a plurality of such packing elements is often backed-up with intermediate rigid washer-shaped rings or spacers. More recently, the engineering of the packing rings and other associated parts of the packing set has become increasingly sophisticated. The stack of the plurality of packing elements, intermediate spacers, and other pieces that can be used in the packing bore are collectively referred to as a "packing stack" or "packing set" or "packing assembly.

...

[0033] Eventually, typically after about two-to-three years of pump operation, however, the packing bore itself will require a major overhaul. During the reciprocating action of the plunger, the parts and pieces of the packing set have slight movement and this, along with corrosion, vibration and other factors, will cause the packing bore surface to deteriorate. Further, as the packing wears and loosens, the packing will in turn will increasingly wear on the interior cylindrical wall of the plunger

bore. *Eventually, the packing bore becomes useless as a sealing surface to prevent the compressed product from escaping from the pumping chamber to the pump exterior.* Then it becomes necessary to recondition the packing bore diameters in a major overhaul of the pump. This is usually done by boring out the packing bore inside diameter to accommodate a sleeve, which replaces the original packing bore sealing surfaces with a new one.

The specification identifies the "*seat*" of the packing bore:

> [0022] The packing bore typically has a "seat" (sometimes referred to as a "land") adjacent the high-pressure end thereof, which is toward the plunger bore. *The seat is generally annular in shape, presenting an annular surface generally facing the low-pressure end of the packing bore, which is away from the plunger bore. The annular surface of the seat is preferably at a substantially perpendicular angle relative to the axis of the interior wall of the packing bore, but it can be at an oblique angle. The central opening in the seat allows for insertion of the plunger through seat. The seat of the packing bore can be formed as a shoulder between the interior wall of the packing bore and the plunger bore.*

The specification identifies the "*removable gland*" of the packing bore:

> [0023] A removable "gland" (sometimes referred to as a "top gland" or "top piece") is typically positioned adjacent the low-pressure end of the packing bore, which is away from the plunger bore. *The gland is for axially capturing and squeezing the packing material or packing set positioned in the annular space within the interior wall of the packing bore against the seat of the packing bore.* A central opening in the gland allows for insertion of the piston rod or plunger through the gland.
>
> [0024] The gland is generally annular in shape, presenting an annular surface generally facing the high-pressure end of the packing bore, which is toward the plunger bore. The annular surface of the gland is preferably at a substantially perpendicular angle relative to the axis of the interior wall of the packing bore, but it can be at an oblique angle.
>
> [0025] *The removable gland typically is formed as a part of a body adapted to be removably secured to the body forming the interior wall of the packing bore.* For example, the gland can have a circumferential flange or flange lobes through which bolts can be

secured to the body forming the interior wall of the packing bore. In another design, the gland can have a circumferential threaded connector adapted to screw with a corresponding circumferential threaded connector on the body forming the interior wall of the packing bore, in which case the gland is sometimes referred to as a "gland nut."

...

[0029] The packing material (or packing set) is *axially captured and retained within the interior wall of the packing bore between the seat of the packing bore and the gland, which is positioned and tightened over the packing*. Over-tightening of the gland on the packing can cause excessive friction as the plunger reciprocates through the packing elements, causing excess wear, heat, and even breakage of the plunger.

[0030] As mentioned above, a major problem associated with positive-displacement fluid pumps, especially high-pressure pumps, is that of providing a satisfactory seal for the plunger. This seal has normally been in the form of soft, nonabrasive packing elements adapted to seal the annular space between the pump plunger and the bore of the packing bore. *During the power stroke of the plunger, the internal pump pressure acting axially on the packing set helps the packing rings to deform or deflect into sealing engagement between the reciprocating plunger and the packing bore.*

...

[0100] [Referring to Figure 1] A typical prior-art packing arrangement is illustrated in the packing bore **28**, and *a gland, such as a gland nut* ***32****, for example, can be used to secure the packing and other parts in the packing bore and against the seat of the packing bore.*

[0101] In this example, the gland nut 32 has a threaded portion that is screwed into a correspondingly threaded portion of a gland adapter 34. A flange portion 37 of the gland adapter 34 is captured between the fluid-end body 12 and the power frame 36 by the attachment of the fluid end 12 to the end of the power frame 36 (partially shown) of the power end (not shown). The glad adapter 34 acts as a line up boss for the fluid-end body 12 on the power frame 36. ...

...

[0103] Typical packing set elements that can be used in a packing bore 28, include, for example, a bottom abutment ring **40**, a plurality of packing rings **42**, a lantern ring **46**, and an upper abutment ring **48**. The upper abutment ring **48** has a shoulder portion **49** *that can be axially compressed by the gland nut* ***32****. It*

*is important not to over-tighten the gland nut 32, however, or the packing will be over-tightened against the plunger **38**, causing excessive friction wear and even breakage of the plunger **38**.*

...

[0105] **Figure 2** is a cross-sectional view of a fluid end **10** and power-frame attachment of a typical prior-art plunger-type pump known as the "323 Wheatley", *generally similar to that shown in **Figure 1**, illustrating a prior-art stuffing box **50** that is permanently secured in a stuffing-box bore **52** formed in the fluid-end body **12**. In this case, the stuffing box **50** provides the packing bore **28**. The stuffing box **50** cannot be removed unless the fluid-end body **12** is removed from the power frame **36** (partially shown).*

...

[0160] [Referring to **Figure 6**] According to the example of this embodiment, the length of telescoping travel is adapted to allow for the movement of the spring **462** from a substantially relaxed condition to a substantially compressed condition. In the substantially relaxed condition, the spring **462** is not compressing the packing elements, and the packing cartridge **400** can easily be positioned as a whole on a plunger and in the packing bore **28**. *After being positioned in the packing bore **28**, the tightening of the gland nut compresses the packing cartridge **400** between the seat **29** of the packing bore and the gland nut.*

...

[0161] **Figure 7** is a cross-sectional view of another embodiment of a packing cartridge **500** similar in all material respects to the embodiment shown in **Figure 6**, with the addition of a presently most preferred embodiment of a means for retaining the telescoping structures together. ...

...

[0184] **Figure 10** is a cross-sectional view of another embodiment of a packing cartridge **800** generally similar to the embodiment shown in **Figure 9**, with variations including a snap ring to retain the sleeve portions together and a spring sleeve portion isolates and protects the coil spring from the reciprocating plunger. *The packing cartridge **800** is illustrated in the packing bore **28** of a pump, including a gland nut **32** positioned over the packing cartridge **800**.*

...

[0193] **Figure 12** [the elected species] is a cross-sectional view of another embodiment of a packing cartridge **1000** similar in all material respects to the embodiment shown in **Figure**

7, with the addition of a means **1090** for dampening the impact of pressure cycles on the packing.

The specification identifies and describes the cooperative function of the "*seat*" and the "*removable gland*" of a packing bore:

> [0028] *The seat of the packing bore provides a land area for the packing set, including the packing and associated parts and pieces. With the packing rings and other pieces of a packing set are positioned in place in the packing bore against the seat, the plunger inserted through the packing set. Then the gland is then positioned in place over the packing set. The gland, when tightened, axially compresses and squeezes the packing set. This action causes the shape of soft packing material to distort, creating a tight sealing area between the packing bore and the outside diameter of the plunger, preventing any substantial leak of internal compressed fluids from around the plunger.*
>
> [0029] *The packing material (or packing set) is axially captured and retained within the interior wall of the packing bore between the seat of the packing bore and the gland, which is positioned and tightened over the packing.* Over-tightening of the gland on the packing can cause excessive friction as the plunger reciprocates through the packing elements, causing excess wear, heat, and even breakage of the plunger.

The packing cartridge according to the claimed invention has a "sleeve" with an outer profile that is "adapted to be at least partially positioned in the packing bore":

> [0114] *In general, each packing cartridge has a sleeve with a major outer diameter that rides in an original packing bore of the fluid-end body or stuffing box.* The sleeve also has an internal bore that acts as a new packing bore. Preferably, the sleeve is a relatively thin-walled structure, which is supported within the relatively heavy-walled structure provided by the original packing bore of the pump, either as part of the fluid-end body or a stuffing box. This sleeve provides a bore that is similar to the original packing bore, except that it does not have the relatively massive body structure of the fluid end required to support a reciprocating plunger therein. The thickness of the sleeve of the packing cartridge can be made thinner or thicker, however, to allow for changing the size of the plunger in the packing bore. The sleeve relies on the structural support of the

> original packing bore. Because of the wall thickness of the sleeve in the packing bore of the fluid end body, the internal packing bore provided by the sleeve is somewhat smaller in internal diameter of the original packing bore.
>
> ...
>
> [0133] If desired, a sealing ring **152** can be positioned between the seat **29** of the packing bore **28** and the packing cartridge **100**. A seal ring **152** helps prevent fluid from entering any clearance between the outside wall of the sleeve **102** and the inside wall of the packing bore **28**. Such a sealing ring preferably has elastic properties with a relatively high minimum yield and can have relatively low tensile strength. The sealing ring **152** can be formed, for example, of a rubber or rubber-like material.
>
> ...
>
> [0147] If desired, a sealing ring **258** can be positioned in a sealing ring groove **259** in the outer wall of the first element **210** between the packing cartridge **200** and the packing bore **28**. Such a sealing ring **258** preferably has elastic properties with a relatively high minimum yield and can have relatively low tensile strength. The sealing ring **258** can be formed, for example, of a neoprene or rubber-like material.

Considering Applicant's disclosure, it is respectfully noted that Covert et al. does not disclose a "packing cartridge" in a "*packing bore*" or having a structure *capable of being used* in a "packing bore."

Applicant respectfully traverses calling the structure disclosed in Covert et al. any kind of "packing cartridge" *for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used* in Applicant's disclosure and claims.

Covert et al. does not disclose a "packing cartridge" at all, but, as best understood, Covert et al. discloses a valve packing system, wherein the "bonnet portion 24" (Covert, Figure 1, Column 2, Line 67 – Column 3, Line 1; Figure 3 and Column 3, Lines 53-56) is a part of the valve body 12. Thus, the "bonnet portion 24" (Figure 1) and the "shoulder 52" (Covert et al., Figure 3) are not a packing cartridge that fits into a packing bore. As best understood, Covert et al. does not disclose removing the "bonnet portion 24" or positioning that "bonnet portion 24" in a packing bore.

In contrast to the invention as claimed, the structure disclosed in Covert et al. includes *a valve body*:

> *... the valve body **12** is preferably formed from a suitable metal, such as stainless steel, and includes a vertically extending central body section **12a*** with a transversely extending cylindrical valve chamber **28**. The ends of the valve chamber **28** are closed by body sections **12b** and **12c** which carry the previously-mentioned inlet and outlet ports **16** and **18**. Suitable end fitting members **30** and **32** are provided on the body sections **12b** and **12c** thereby allowing the valve to be **20** connected to the associated pipe or tubing. In the subject embodiment, the end fittings **30** and **32** are shown as conventional ferrule type fittings, although any other type of conventional end fitting could equally well be used.
>
> *The body sections **12b** and **12c** are joined to the central body section **12a** in any convenient manner such as by being clamped thereto by bolts or by being positively joined by election beam welding or the like.*

Covert et al. discloses a "first packing assembly **66** which is received in a counterbore **68** formed in the lower end of the bonnet **24**" and a "second packing assembly **94** ... located axially outward of the packing assembly **66** and is carried in the gland or packing nut member **76**" (Column 4, line 5 – Column 5, line 30).

Covert et al. does not disclose "a packing cartridge *for use in a packing bore of a plunger-type pump, wherein the packing bore has a generally cylindrical interior wall and a seat and a removable gland.*"

Covert et al. does not disclose "a generally-cylindrical sleeve having an outer cylindrical profile *adapted* to be at least partially positioned in the packing bore." The outer profile of the element 12a disclosed in Covert et al. is not adapted for use in a packing bore. Nor does Covert et al. disclose doing so.

If this rejection is maintained, in preparation for appeal Applicant respectfully requests clear identification in Covert et al. of each of the following contextual elements, as each such term is used in Applicant's pending claims and *for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used*:

(a) the "packing cartridge" (Fig. 3)";

(b) the "packing bore (Fig. 3)";

(c) the "cylindrical interior wall" of the "packing bore (Fig. 3)";

(d) the "seat" of the "packing bore (Fig. 3)"; and

(e) the "removable gland" of the packing bore.

In addition, Applicant respectfully requests clear identification of *how* "the packing cartridge of the Covert et al. reference is **capable of** being used in the environment as claimed in claim 1" (original emphasis), that is, *how* is the structure of Covert et al. *capable of being used in a packing bore between the seat and the removable gland, as claimed.*

"Operatively Positioned" Elements

In addition to the above differences with Covert et al., independent claim 1 requires:

> d. telescoping structures *operatively positioned* between the first abutment ring and the second abutment ring *to allow for squeezing of the first abutment ring and second abutment ring co-axially closer to one another*; and
>
> e. a retaining ring operatively positioned between the telescoping structures *to retain the telescoping structures together and to allow for squeezing of the first abutment ring and second abutment ring co-axially closer to one another; ...*

Claim 65 requires:

> a second sleeve portion having at least a portion thereof telescopically positioned in at least a portion of the first sleeve portion; and
>
> ...
>
> *wherein the first sleeve portion and the second sleeve portion and the means for axially retaining are operatively positioned between the first abutment ring and the second*

abutment ring to allow for squeezing of the first abutment ring and second abutment ring co-axially closer to one another; …

Claim 135 requires:

e. *telescoping structures operatively positioned between the first abutment ring and the second abutment ring to allow for squeezing of the first abutment ring and second abutment ring co-axially closer to one another*; and

f. *a retaining ring operatively positioned between the telescoping structures to retain the telescoping structures together and to allow for squeezing of the first abutment ring and second abutment ring co-axially closer to one another; …*

In regard to "operative" limitations, MPEP 2171.05(g) provides:

A functional limitation must be evaluated and considered, just like any other limitation of the claim, *for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used.* A functional limitation is often used in association with an element, ingredient, or step of a process to define a particular capability or purpose that is served by the recited element, ingredient or step. >In Innova/Pure Water Inc. v. Safari Water Filtration Sys. Inc., 381 F.3d 1111, 1117-20, 72 USPQ2d 1001, 1006-08 (Fed. Cir. 2004), the court noted that *the claim term "operatively connected" is "a general descriptive claim term frequently used in patent drafting to reflect a functional relationship between claimed components," that is, the term "means the claimed components must be connected in a way to perform a designated function."* "In the absence of modifiers, general descriptive terms are typically construed as having their full meaning." Id. at 1118, 72 USPQ2d at 1006. *In the patent claim at issue, "subject to any clear and unmistakable disavowal of claim scope, the term 'operatively connected' takes the full breath of its ordinary meaning, i.e., 'said tube [is] operatively connected to said cap' when the tube and cap are arranged in a manner capable of performing the function of filtering." Id. at 1120, 72 USPQ2d at 1008.*<

…

In a claim that was directed to a kit of component parts capable of being assembled, the Court held that limitations such as "members adapted to be positioned" and "portions ... being resiliently dilatable whereby said housing may be slidably positioned" serve to precisely define present structural attributes of interrelated component parts of the claimed assembly. In re Venezia, 530 F.2d 956, 189 USPQ 149 (CCPA 1976).

This language requires *not only* that there be "telescoping structures" or "a second sleeve portion having at least a portion thereof telescopically positioned in at least a portion of the first sleeve portion" or "a retaining ring" or a "*means for axially retaining,*" but *in addition* that each is "operatively positioned" *to allow* for the specified purpose or purposes.

The definition of "squeezing … co-axially closer to one another" is clear and unambiguous. For example, common dictionary definitions of "squeezing" include:

> (transitive verb) 1 a : *to exert pressure especially on opposite sides of : compress* b : to extract or emit under pressure c *: to force or thrust by compression …* "squeezing." Merriam-Webster Online Dictionary. 2010. Merriam-Webster Online. 17 May 2010 http://www.merriam-webster.com/dictionary/squeezing
>
> verb (used with object) 1. *to press forcibly together; compress.* "squeezing." The American Heritage® Dictionary of the English Language, Fourth Edition. Houghton Mifflin Company, 2004. 17 May 2010. <Dictionary.com http://dictionary.reference.com/browse/squeezing>.

In addition, the specification makes it clear that "squeezing" is independent of rotation, such that the elements can be free to rotate relative to one another, but this is not required:

> [0116] Telescoping structures are operatively positioned between a first abutment ring and a second abutment ring to allow for squeezing of the first abutment ring and the second abutment ring co-axially closer to one another. The telescoping structures are preferably free to rotate relative to one another as the abutment rings are axially squeezed together to apply the appropriate squeeze to the packing elements and other elements that can be positioned there between.
>
> [0117] *The squeezing of the telescoping structures is preferably provided by capturing the packing cartridge in the packing bore between the seat* ***29*** *of the packing bore* ***28*** *and a gland, such as gland nut* ***32***. The fluid-end body **12** is rigidly held in place by the power frame **36** of the pump and *a gland, such as gland nut* ***32****, can be threaded or otherwise bolted to the fluid-end body* ***12***. Thus, there is no need to hold or prevent the packing cartridge from rotating about its axis to apply axial squeezing to the packing therein.
>
> [0118] Furthermore, the telescoping elements allow the packing to remain in a relaxed condition until a plunger in inserted

> through the packing cartridge and the packing cartridge is positioned in the packing bore **28**. This is important because if the packing is squeezed or compressed prior to inserting a plunger through the packing, it would be much more difficult to insert the plunger through the packing. Thus, according to certain aspects of the invention, packing cartridges are provided that allow the packing stack to be held in a pre-assembled but relaxed condition prior to being positioned in the packing bore. Then, the packing cartridges can preferably be axially compressed in the packing bore on the plunger and between the seat of the packing bore and a gland. *The gland is preferably used to transfer rotational force to axial, compressing force on the telescoping elements of the packing cartridge in the packing bore.*

These are limitations that Cover et al. does not teach or suggest, and these limitations do require a structural difference from the structure disclosed in Covert et al. For example, the threads **80** and **82** in the structure disclosed in Covert et al. are operatively positioned between the nut member **76** and shoulder **52** in a manner that would *prevent "squeezing" of the first abutment ring and second abutment ring co-axially closer to one another.*

In addition, the definition of "retain ... together" is clear and unambiguous. The threads **80** in the structure disclosed in Covert et al. are operatively positioned between the nut member **76** and shoulder **52** in a manner that would *prevent* the retaining ring from being operative "to retain" the telescoping structures together. In Covert et al., the o-ring seal element **90** "functions to provide a fluid seal between the cylindrical exterior of nut member **76** and the interior of the bonnet chamber **78**." Covert et al., Column 4, lines 36–39. The threaded connection disclosed in Covert et al. would prevent any other operation of the o-ring element **90**. The o-ring seal element **90** is not "operatively positioned" to retain telescoping structures together.

The structures or elements disclosed in Covert et al. are not *operatively positioned* as required by independent Claims 1, 65, or 135.

If this rejection is maintained, in preparation for appeal Applicant respectfully requests clear identification in Covert et al. of *how* the elements are "operatively positioned" to *"to allow for squeezing of the first abutment ring and second abutment ring co-axially closer to one another"* and *for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used* in each of the claims.

Dependent Claims

As discussed above, the rejection of the independent claims is traversed and not understood. In this context, it is difficult to discuss the independent patentability of the various dependent claims at this time.

Conclusion

It is believed that the pending claims are in condition for allowance, and such action is respectfully requested.

Applicants' arguments and amendments are without prejudice or disclaimer. Additionally, other distinctions from the cited references may exist, and Applicants reserve the right to discuss any such additional distinctions in a later prosecution response, in any reissue or reexamination, or in litigation, if appropriate.

If a telephone conference might expedite the prosecution of this application, please contact the undersigned at 214-220-0444.

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Respectfully submitted,

/Todd E. Albanesi/

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